



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,212	08/27/2003	Hironori Kobayashi	CU-5984	6138
26530 7590 08/29/2009 LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604			EXAMINER RAYMOND, BRITTANY L	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 08/20/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/649,212

Applicant(s)

KOBAYASHI, HIRONORI

Examiner

BRITTANY RAYMOND

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 51-67 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-50 is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 51-67 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/5/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (JP 2000-249821, English translation from JPO) in view of Kobayashi (U.S. Patent Publication 2002/0006558).
4. In Kobayashi ('821), a photocatalyst-containing layer-sided substrate 3 comprises a substrate 1 (second) and a photocatalyst-containing layer 2. The

photocatalyst may be TiO_2 [0016]. The photocatalyst containing layer may include organosiloxane having a fluoroalkyl group [0087]-[0090]. Pattern forming body 6 comprises a transparent (first) substrate 4 and characteristic varying layer 5. The photocatalyst-containing layer 2 is placed in contact with the characteristic varying layer 5 and exposed to form a pattern 10. See abstract. The characteristic varying layer is a wettability change layer wherein the wettability or contact angle changes [0018]. The property change layer may be used as a decomposition removal layer in which decomposition removal is carried out by operation of the photocatalyst [0023], [0102]. The pattern may be formed by a hardening process using UV, heat or e beam [0139]. The wettability change layer may be coated by coating the entire layer using and then removing the portions depending on wettability [0142]. Various functional components, such as metals, can be obtained by using the pattern formed in the property changing area, dependent on the requirements for the specific device being manufactured [0133]-[0138]. Light filter and microlenses may be formed by applying ink which adheres to regions depending on wettability, followed by a hardening or stiffening process [0144]-[0145]. The functional pattern layer may be formed using a nozzle and a dip coating, spin coating or ink jet method [0140]. While JP 2000-249821 does not explicitly disclose that the functional pattern layer is a metal colloid, the reference does teach using the method for forming metal patterns in the manufacture of color filters. The Kobayashi ('558) reference teaches adhering a metal colloid to a pattern of exposed, lyophilic areas in order to form metal patterns for use in color filters [0001 and 0661-0663]. It would have been obvious to one of ordinary skill in the art to use a colloid as the

functional layer in order to form the metal patterns in order to manufacture a color filter in the method of 2000-249821 because Kobayashi ('558) teaches adhering a metal colloid to a pattern of lyophilic areas in order to form metal patterns for use in color filters. The Kobayashi ('558) reference also discloses that a photocatalyst-containing layer can be used only or under a wettability variable layer or decomposition removal layer in the same process described by Kobayashi ('821) [0212]-[0217] & [0251]-[0254]. It would have been obvious to one of ordinary skill in the art to directly pattern the photocatalyst-containing layer because Kobayashi ('558) teaches that this layer can have its wettability changed in order to form conductive patterns more efficiently.

Allowable Subject Matter

5. Claims 29-50 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter: The prior art references do not teach or suggest forming a gap of 200 microns or less, without contact, between the photocatalyst treatment layer and the property variable layer during exposure.

Response to Arguments

7. Applicant's arguments filed 5/12/2009 have been fully considered but they are not persuasive.

Applicant argues that the prior art references do not teach that the wettability changing layer comprises a photocatalyst, but rather that they teach a wettability changing layer that is altered through photocatalytic action. The reference Kobayashi ('558) teaches that a photocatalyst-containing layer can be used alone as the wettability

changing layer in an exposure process equivalent to the process of Kobayashi ('821) (Figures 1A-1C). Kobayashi ('558) also teaches that the photocatalyst-containing layer can be placed under a wettability variable layer or decomposition removal layer in a similar process (Figures 2A-2C & 3A-3C).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY RAYMOND whose telephone number is (571)272-6545. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Kathleen Duda/
Primary Examiner, Art Unit 1795**

blr